



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/532,801 | 04/25/2005 | Atsushi Murakami | 10873.1689USWO | 8930 |
| 52835 | 7590 | 05/05/2006 | EXAMINER | |
| HAMRE, SCHUMANN, MUELLER & LARSON, P.C. | | | ALLEN, STEPHONE B | |
| P.O. BOX 2902-0902 | | | | |
| MINNEAPOLIS, MN 55402 | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/532,801

Applicant(s)

MURAKAMI ET AL.

Examiner

Stephone B. Allen

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The wording of this claim is unclear. It appears that the same step is being performed, even though it is meant to replace step (b) of claim 7. Please clarify.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3- 5, 7 and 9 are U.S.C. 102(b) as being anticipated by JP7143284 to Katsunori.

With respect to claims 1, 3 and 4, Katsunori (figure 1) discloses an optical unit comprising a plurality of transparent substrates (blocks) and a plurality of interference (dichroic) films 11, 12, 13 whose wavelength ranges of reflecting light are different from one another, and a metal reflecting film (total reflection film). The dichroic films are interposed between the transparent blocks and joined so that they are parallel and reflect only light whose wavelength is at or below a specified wavelength.

With respect to claim 5, Katsunori discloses an optical sensor comprising an optical unit as claimed and an photoreceptor (light receiving element array) in which a plurality of light receiving surfaces are disposed in a row so that light incident on from the transparent block is reflected by the dichroic film and is incident on the photoreceptor.

With respect to claims 7 and 9, Katsunori discloses an optical unit manufacturing method, comprising a process of forming a dichroic film on one surface of a first transparent block, and similarly forming another dichroic film with a reflected light wavelength that is different from dichroic on one surface of a second transparent block, superimposing said first transparent block and second transparent block so that they are laminated parallel to one another and the two dichroic films do not make direct contact, and forming a dichroic film group that is mechanically and optically adhered, and cutting said dichroic film group at a plane that has an angle of about 45 degrees.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsunori.

Katsunori fails to disclose wherein the dichroic films reflect only light whose wavelength is at or above a specified wavelength. It would have been obvious for one of ordinary skill in the art to modify the device of Katsunori to reflect light at or above a specified wavelength in accordance to the wavelength desired to blocked or transmitted.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP63144661 to Hiroyuki et al, (hereinafter Hiroyuki) in view of Katsunori.

Hiroyuki discloses multi-channel light detection apparatus comprising a plurality of light-emitting lasers 1,2,3 having emission light wavelengths that are mutually different a plurality of CCD line image sensors, and a plurality of dichroic mirrors that separate light from samples into R, G, and B; the plurality of dichroic mirrors are disposed in the sequence of reflecting R, G, and B light. Hiroyuki fails to disclose the use the light receiving arranged as claimed. Katsunori discloses the light receiving arrangement comprising a plurality of transparent blocks and plurality of dichroic films (parallel) that are different in wavelength range and interposed between respective transparent blocks. It would have been obvious for one of ordinary skill in the art to modify Hiroyuki to include a light receiving arrangement as disclosed in Katsunori in order to obtain a more compact system.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each discloses optical units having a plurality of dichroic films separated by a plurality of transparent blocks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephone B. Allen whose telephone number is 571-272-2434. The examiner can normally be reached on M-F 08:30-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephone B Allen
Primary Examiner
Art Unit 2878

sba